ABSTRACT OF THE DISCLOSURE

A power supply apparatus for stabilizing a voltage generated on a power supply line by an electric motor, for preventing a battery from being overcharged, preventing an overvoltage from being generated, and protecting system components from an overvoltage, even when a battery is removed or no electric power is supplied from the battery to a control means. The apparatus includes a drive circuit for energizing a permanent-magnet brushless motor and a control circuit for controlling the drive circuit. A power supply state detecting circuit (activating unit) activates the control circuit depending on a voltage value on a power supply line of the motor. A voltage stabilizing means including a relay and a regenerative resistor stabilizes the voltage on the power supply line when the relay is opened and closed under the control of the control circuit. The voltage stabilizing means may include the drive circuit.